

VIRGINIA WILDLIFE

DECEMBER 2010

FOUR DOLLARS



Bears in Abundance • Wildlife Conservation Model • Coursey Springs Facelift



Bob Duncan Executive Director

Wildlife management is never without its challenges, nor has it been without its champions. The fall issue of *The Wildlife Professional*, a publication of The Wildlife Society, reveals that such was the case in this country during the 1880s when concern for the future of wildlife populations resulted in the formation of many different hunting, conservation, and scientific organizations to combat market hunting for meat and hides and the indiscriminate killing of herons and egrets for feathers for the millenary trade. These organizations also fought for bans on the wanton waste of game after the country witnessed the decimation of the bison herds during the 1860s and '70s. In response, Teddy Roosevelt and other conservation-minded individuals moved to form the Boone and Crockett Club to preserve big game species.

The 1930s was a watershed decade for the wildlife profession, born out of the dust and despair of the Great Depression. During this era, the migratory bird stamp (the duck stamp) was established in 1934; Aldo Leopold became the first professor of wildlife management in the U.S. at the University of Wisconsin; and the greatest trust fund ever created for wildlife conservation—the Pittman-Robertson Federal Aid in Wildlife Restoration—was passed by Congress. This legislative milestone in conservation was co-authored by a native son of Virginia and former chairman of what was then the Virginia Commission



of Game and Inland Fisheries, A. Willis Robertson. These men rose to the challenges of their time, paving the way to modern wildlife management.

Fast forward to 2010. We now face the challenges of climate change, habitat loss and fragmentation, invasive species, emerging wildlife diseases (such as chronic

wasting disease in deer and white-nose syndrome in bats), water quality issues, and the impacts of pollution from myriad sources. Overshadowing such issues is the omnipresent challenge of sustainable conservation funding at both the state and national levels.

In this issue of *Virginia Wildlife* are two especially timely and related pieces. In the feature about the North American Model of Wildlife Conservation, King Montgomery explains the genesis and essential components of that model, and suggests that the challenges of the 21st century call for an updated framework. His feature is a timely precursor to the financial outlook presented by Chief Operating Officer Matt Koch, who provides a straightforward accounting of our finances and the range of options available to better position our agency to meet future funding needs.

Those who know me will attest to my optimistic nature. They will not be surprised to hear me say that, reflecting true American spirit, we will garner the resources and the integrity to rise to this difficult task.

Mission Statement

To manage Virginia's wildlife and inland fish to maintain optimum populations of all species to serve the needs of the Commonwealth; To provide opportunity for all to enjoy wildlife, inland fish, boating and related outdoor recreation and to work diligently to safeguard the rights of the people to hunt, fish and harvest game as provided for in the Constitution of Virginia; To promote safety for persons and property in connection with boating, hunting and fishing; To provide educational outreach programs and materials that foster an awareness of and appreciation for Virginia's fish and wildlife resources, their habitats, and hunting, fishing, and boating opportunities.

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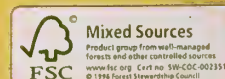
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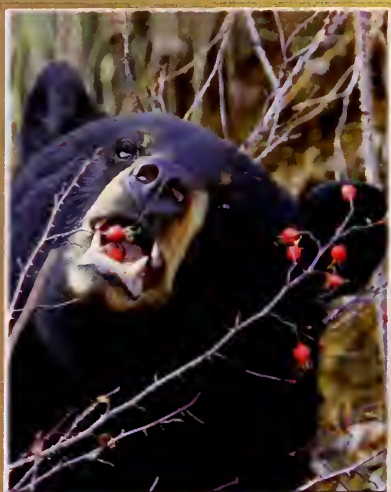
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Bear in A

*A look at the black bear
research program
launched in the early '80s
and the man behind it.*

by Nancy Wright Beasley

Students no longer move quietly down the path between the two rows of cages, trying not to disturb nursing mothers. The ever-present whir of an oscillating centrifuge has stopped, empty test tubes resting in a stand nearby. The squall of cubs, resisting efforts to weigh and measure them, hasn't been heard in months. The passing of over a quarter-century of research has come and gone so quietly that few, other than those directly involved, will notice. The effect of years of black bear research, however, has spread internationally, positioning Virginia as a leader in the field.

Dr. Michael R. Vaughan, who originated the program and recently retired as its only director, stands looking into an empty cage, recalling how the work began just after he completed a doctorate in wildlife ecology at the University of Wisconsin. Vaughan, a Hampton native, was looking for a way to return home.

As Assistant Leader of the Virginia Cooperative Fish and Wildlife Research Unit (a collaboration

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among our agency, the Dept. of Fisheries and Wildlife Sciences at Virginia Tech, and the USGS Biological Resource Div.), Vaughan has provided key research support, answering many wildlife management questions throughout Virginia. "I arrived at Virginia Tech in 1980 in a joint program as a new employee of the federal government and the university. I walked into my office and said, 'Well, what do I do next?'"

What Vaughan did next was make contact with the Department (DGIF), as well as the National Park Service and the U.S. Fish and Wildlife Service.

"I said, 'I'm at Tech. This is my expertise. If we can be of service to you, let me know.'"

It didn't take long for a call to come in. The Shenandoah National Park contacted Vaughan saying they needed a deer study, which led to a bear study, which morphed into a bear management plan for the park. The study was to estimate the number of bears, look at reproductive and survival rates, mortality factors, habitat use, and generally learn what's important to bears in an area that's home to the largest bear population in the commonwealth.

"Starting about 1983, we wound up doing ten years of work that not only included population dynamics, but when gypsy moths came to the state, we looked at how gypsy moth damage affected bear populations."

When gypsy moths defoliate trees, particularly oak trees, it affects the acorn crop, a main food source for



Dr. Vaughan (left and above) begins a sonogram on a sleeping bear. A kerchief shields her eyes, as she must not blink under anesthesia.

©Nancy Wright Beasley

bears. The study revealed that the moths' appetite for leaves allowed more light to reach the ground, encouraging a good production of grapes and other soft mast that bears feed upon in lieu of acorns; therefore, the defoliation didn't affect bear survival or reproductive rates.

At the same time, Vaughan was overseeing research in such far-flung locations as Alaska, Colorado, and the Virgin Islands. In the last three decades, it seems there was never a time when this husband, father, and now grandfather wasn't busy.

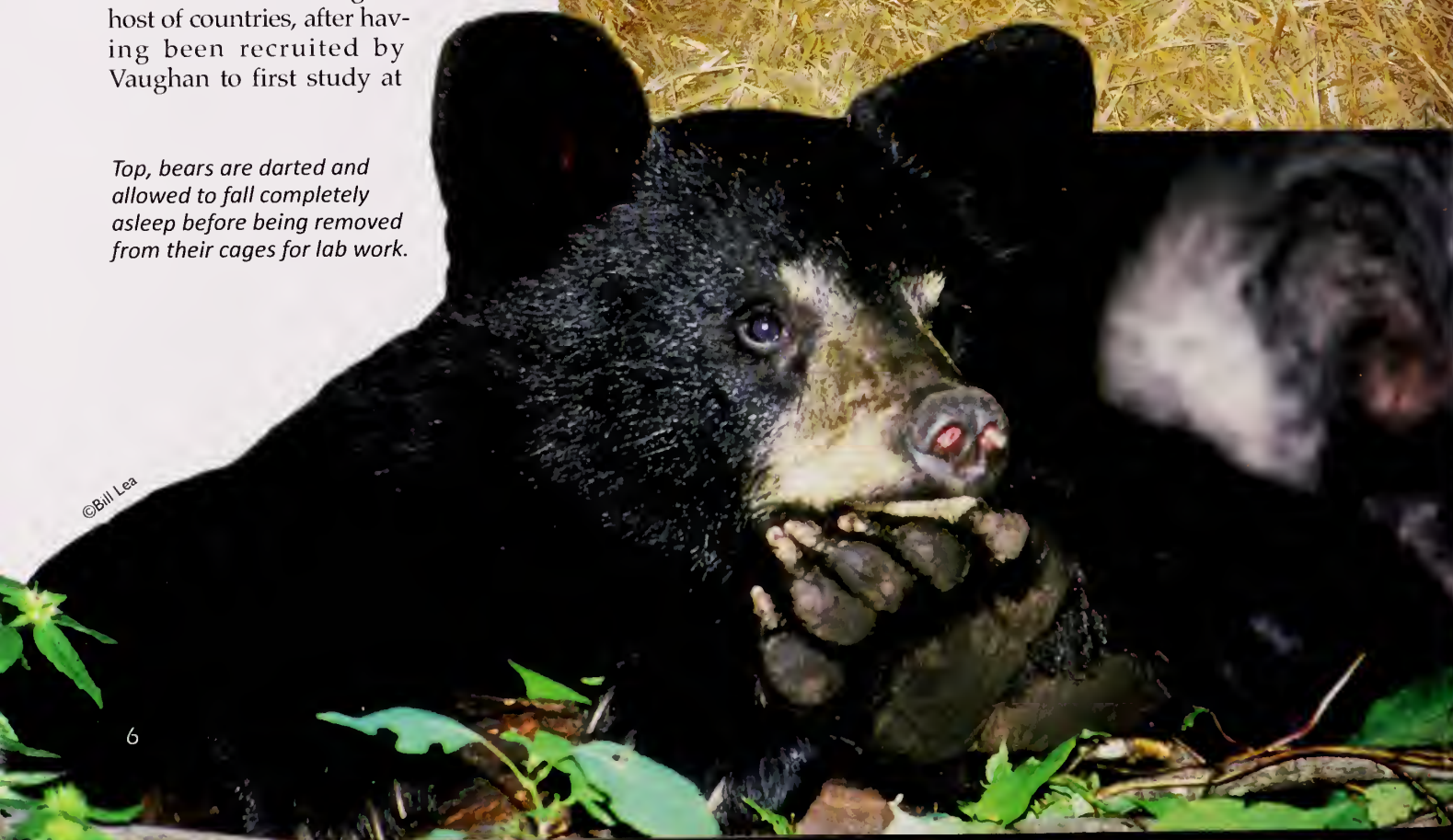
"You learn to juggle a lot of different things," Vaughan says with a wide grin. "I don't know how to describe how it comes to you—you just learn to do it."

Along the way, Vaughan became a tenured professor at Tech, helping numerous graduate and doctoral students earn degrees and secure positions all over the world. Eric Hellgren, the original student who helped with captive black bear research in Virginia, is now the director of the Cooperative Wildlife Research Laboratory at Southern Illinois University. Others have become bear biologists in the region. Still more students are working in a host of countries, after having been recruited by Vaughan to first study at



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Top, bears are darted and allowed to fall completely asleep before being removed from their cages for lab work.



©Bill Lea



Dwight Dyke

Shown here, an actual den tree in the wild.

Tech. Many of his students have lectured in foreign countries, reporting on the field work they've pioneered on the black bears that inhabit almost every one of Virginia's 98 counties.

"Eric and I built the first cage for the captive bears at this compound. We got our first bear in 1987."

Bob Duncan, then assistant chief of wildlife at the DGIF, suggested Vaughan use a bear from Maymont Park for the experimental phase. Vaughan needed to hold the bear over the winter and determine if it

could withstand having a blood sample drawn every 10 days without adversely affecting its health. When that was successful, Duncan helped secure the needed permits from the Department. Over time, six cages were built to house and study bears captured by DGIF staff and brought to the bear research facility that's tucked away in a thicket of woods near the agricultural studies program at Tech.

Funding for the project was secured through a dissertation studies

tuition grant for Hellgren, wildlife departments in the state and federal government, as well as research grants. Different hunt clubs also contributed significantly. Funds were eventually secured to build a research office, complete with a laboratory and an apartment where one student lived full-time to help care for the animals. While numerous Tech students worked on the study for college credit, many others volunteered, just to be near the cubs.

Peak breeding season for black bears begins in July. Female bears were generally captured from mid-July to August, enabling blood samples to be drawn beginning in early October. The bears were anesthetized every ten days and samples drawn through April. Results of the studies have even been applied toward human research.

"We had a psychiatrist interested in comparing particular elements of blood samples from denning bears to those of his patients who were depressed. He learned that some components in the blood were similar. Another study is trying to determine how a bear can remain virtually asleep and not lose bone mass. That could have far-reaching implications for elderly patients with osteoporosis, because humans lose bone mass if they don't stay active.

"Bears breed every other year, so we were looking for adult females who were not lactating. Once we started getting into ultrasound, we knew how many cubs to expect from each female. We started being able to measure them in utero."

Using the measurements taken after their births, Vaughan developed an algorithm that could age any cub.

"By comparison, we could determine the age of cubs and that's something hard to tell in the wild. These bears are in a den and you don't know when birth is actually occurring.



©Nancy Wright Beasley

Undergraduate research students Ashley Graham (L) and Gabriela Zapatero (R) measure and record growth of cubs, including their feet.

"We also weigh the mother bears and do other tests, like fat studies to determine how much weight they are losing. Lactation is a very energy demanding activity. When a mother bear is feeding, she can lose up to two pounds a day," Vaughan explains. "Tests for progesterone levels can determine within five days when the bear is implanted. Female black bears can hold a fertilized egg in limbo until the time is ripe for implantation. If the bear isn't healthy enough to carry the cub, the fertilized egg is absorbed. A few other animals, like wolverines, also do this delayed implantation."

Litters typically range between one and four cubs, usually born in January. Although their claws cannot retract, cubs can easily be handled during their mother's anesthesia period, and their statistics added to the records kept during the process. All are released back into the wild in May, after spring gobbler season is over and hunters are out of the woods. While held captive, the bears enter their denning period.

"Bears are not true hibernators," Vaughan emphasizes. "They go into a den and lower their temperature from about 101 to about 93 degrees. Their heart rate slows to 8-10 beats per minute, but they're not in a stupor and can be easily aroused. Bears do not eat or drink, urinate or defecate, but shut down their systems at this time. We stop feeding them in late December and begin again in April. In this part of the country, bears are in this quiet state from November to March or April. In other areas, a bear can den for up to seven months."

Denning bears can lose up to 30 to 40 percent of their body weight. A female adult averages about 120-150 pounds in the summer but may reach up to 170-210 pounds before denning. On occasion they may rise and walk around.

"When the babies are born in January, the bears are awake. They may even stand up for the birth," Vaughan says. "We actually recorded that once in this study and one other birth as



Dr. Vaughan prepares medication to sedate a bear while Bob Duncan looks on.

well. A bear cub weighs about a half pound and is about six inches long. They're almost hairless and their eyes and ears take about five or six weeks to open."

In addition to the captive bear research where about 190 cubs were born over the years, Vaughan co-directed the 10-year Cooperative Alleghany Bear Study with the DGIF from 1994-2004 to study the demography of bear populations in western Virginia. "That was the biggest study we did in Virginia," Vaughan says. "I had 11 post-graduate students get their degrees on that project. To address DGIF management questions, we were looking at population dynamics of bears in the Appalachian Mountains of Virginia, trying to come up with bear densities and reproductive and survival rates so we could calculate population growth rates. It's hard to get these long-term studies. An animal like a bear that's long lived, you need 8 or 10 years of research." Over the 10-year study more than 1,000 individual bears were captured and another 455 cubs from 188 litters also were monitored.

Bears can live up to 18 or 20



DGIF Bear Biologist Jaime Sajecki working in the field with a recently anesthetized black bear.

years. There are approximately 16,000 black bears in Virginia and hunting them is allowed. However, when a population is hunted, there is a need to understand the population densities, growth rates, reproduction

and survival rates, habitat use, and impact of harvest. The research results from this cooperative study have provided key information for DGIF to set hunting regulations appropriately. Studying black bear demographics is important for statewide bear management, which is the primary function of Jaime Sajecki, bear biologist for DGIF.

"In talking with state residents, I have learned that many think there are grizzly bears in Virginia when, in fact, the only bears in this state are black bears," Sajecki says. "Part of our mission in the bear program is to educate residents about the natural lifestyle of bears. In doing that, it will cut down on perceived negative or unexpected encounters between bears and humans—which is another objective of our mission and an important component of overall bear management."

According to Sajecki, the Black Bear Management Plan is currently

being updated to ensure that populations remain at desired levels for all citizens to appreciate. A number of factors—including hunting controls, reforestation programs, public land purchases, and management-based research—go into such plans and account for the healthy population of black bears we enjoy today.

Bob Duncan, who became the executive director of the Department in 2008, was on hand in 2009 when Vaughan, his students, and an attending veterinarian discovered the first pregnant female of that year's study through sonograms performed on the anesthetized bear. Later, when the cubs—the last ones Vaughan would study—were about 54 days old, he gingerly held one that was snuggling inside his jacket, resting from its weigh-in.

When asked to describe the biggest achievement of the program, Vaughan thought for a minute, then said, "I don't think it's any one thing.

We have a body of work here that stretches far beyond Virginia. We are known throughout this country and other places in the world as one of the leading places for bear research in the world. We've developed a reputation here, and I've had about 28 of my students who have worked on bear populations publish their research and it's known worldwide."

Vaughan still has his hand in the pot, so to speak, since he is writing grants that he hopes will extend the studies he shepherded for so long.

"I'm proud of what we've been able to accomplish," Vaughan says quietly as he shuts the door to the now silent laboratory. "Even if I'm no longer a part of it, I have no regrets. Life is too short for that." □

Nancy Wright Beasley, a Richmond-based journalist, has been a wildlife enthusiast since growing up on a farm in Virginia's Blue Ridge foothills. She is the author of Izzy's Fire: Finding Humanity in the Holocaust.



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Listening Closely To An Old Bird Dog

by Marc Puckett

Shell, my Llewellyn setter and first bird dog, turned 15 in May last year. I grilled her a hamburger "cake" complete with candles. She was unimpressed. Her only love in life is running free through bird cover.

Shell still hunts after all these years, though slowly and not all day long anymore. Her hips have gotten small and feeble and she often falls when trying to cross an obstacle or plow through cover. But, her eyes still sparkle like a creek rattle in the sun. When she sees my gun case come out of our basement door, she can't contain her excitement. In the instant she realizes where we are going, she becomes an ageless puppy—barking, scratching at the fence gate, and whining, "Don't leave me, don't leave me."

I've learned far more from Shell than she has from me. In fact, I've only recently started to listen. I wish I had learned to listen many years

ago. Shell tells me that there are no bad days in the field, there is no such thing as unhuntable weather, there is nothing in this world that worrying will change and, no matter what a map and compass may say, there is only one true direction in life that matters... and that is forward. She has never once lingered on the truck seat when the door opens, as if to say, "I'm not sure it is worth getting out here, Boss." She knows that when you quit getting out, you are done for.

It is never too late to start listening closely to an old bird dog. Learn to hear and you might find out why life has little to do with a heavy game bag and everything to do with the love of the pursuit.

I became a bird hunter (an upland game bird hunter, for the uninitiated) when most folks were getting out of it, selling their guns, and buying golf clubs. In the beginning I did not have my

own dog and it was all about killing birds. That remained true for a while even after Shell came along. We beat the cover down hard and fast, and I was disappointed when few birds were found. But at the end of those bird-less days I still had a hard time getting Shell back in the truck. I'd walk ahead of her and blow the whistle, but she knew what lay at the end of the trail. Balking, she'd look at me and say, "One more thicket, Boss (Boss, right, LOL). Come on. This will all be over some day." Then she'd drop down on her front legs playfully, give a bounce, and into the cutover she'd go again. I listened closely and began to know why.

I realized that every bird hunter will face the end of a day sometime—standing at the truck exhausted and staring back down the barrel of a 10-mile trek—when they'll look down that trail and know they'll never walk it again. Shell never

looks back or says goodbye. "Until the sight" is the only "so long" she will acknowledge.

There were days when the birds were there; those days that just had "the feel." And Shell knew it, too. You could see it in her face. Something serious was afoot. I remember an afternoon stolen from work in a cutover in Cumberland County, down by the Green Level Swamp with the first hint of a snowstorm in the sky. The air tasted like distilled water, which meant scenting conditions were good and the quail were "on the feed." Shell found a covey feeding in a partridge pea patch that flushed between me and the approaching clouds. They looked like black-winged fighters out of a Star Wars movie and I saw two birds fall at two shots, then lost them in a patch of bright, back-lit clouds—a rare double that I feared were destined to become possum food but, instead, she found. And the excitement in her eyes said to me, "Don't you see it now friend? It's not even the hope, it is the knowing that the birds will be there again."

I closed my eyes and I could see all the finds, all the woodcock, all the grouse, and all the special things along the way. And I could see that the moments of time between those things did not exist. In the end, our lives boil down to fast frames of the memories we've made: movies of all the good and the bad that we remember, with everything else gone forever.

I am listening to Shell again. Behind those deep eyes she says, "Measure your life in memories, friend, not years."

There is an athleticism to bird hunting—a grace and a motion—I can find in no other sport. In an age when it seems that finding time to exercise is like trying to wring water from a brick and staying in shape means spending perfectly good hunting money on some fitness contraption, bird hunting can fill that need in a much richer way. I find it strange that folks who can spend hours hiking through the forest on trails, enjoying the day perfectly without birds or dogs, can turn around and lament a bird-less day hunting—where walking 8 or 9 miles is not uncommon. It is as if the scenery, the new things discovered, the smells, and the sounds were somehow wasted time because nothing made its way into the game pouch.

But this is a story about Shell. And she's not sentimental. She is a fun loving, in-the-moment optimist who has never visited a trail on which she did not want to see around the next bend. I can close my eyes and picture her splashing in an old pond near the skeleton of a log cabin we found high in the mountains of Craig

County 13 years ago. About half the old fire-place still stood and the hand-hewn base logs were intact. An enormous hearth stone made a good place to eat a bag lunch or rest a sore back. I took a short nap on it many times. Growing all around this old homestead were the biggest sweet cherry trees I have ever seen, along with one rare butternut tree. The Appalachian Trail, before it was re-routed, ran within 100 feet of it. Many of the trees had been struck down by ice and wind, and growing through them were thickets of wild grape and greenbrier. It all rested on a flat at the base of a small rift in the main mountain ridge. All of three or four acres, tops, and over one mile uphill from Craig's Creek along the remnants of an old logging road. Sometimes it held a grouse, maybe two, but never more. And sometimes it held only the ghostly apparitions of mothers, fathers, and children long gone under.

Shell and I visited this place dozens of times and never once asked ourselves if it was worth the climb—grouse or no. Thinking about the feel of that old place makes me smile to this day.

I find myself gazing at nothing from time to time as a memory shoves work aside for a few moments. I hear a bell jingle and see Shell on point on the top of an old beaver dam surrounded by a hazel alder thicket. The mud is dripping off her belly. Her ribs pulse in and out as she vacuums the bird scent in. Balancing on the dam, her legs start to shake and she drops down to steady herself, trying to see the woodcock. I walk in and a small covey of quail flushes within feet of us. To see quail in this swampy woodcock habitat startles me; my gun hangs like a useless walking stick from my hands. "You forgotten what we are here for, Boss?" Shell quizzes me, before her angry departure back into the alders.

We wandered much farther west, too, all the way to Kansas. My mind's eye can see frames of Shell's first pheasant. I squirreled away an afternoon to myself while my cousins visited and took the kids to town. I had been into quail all afternoon and shooting poorly. I was down to my last round—a number 6 special pheasant load. About 2 miles from the truck, Shell nudged a pheasant out of a cattail thicket. I fired my last round a bit long. Though hit hard, the tough old cockbird flew out of sight just over a hilltop 100 yards away, clearing it by only a couple of feet. Shell was not far behind him and disappeared a few seconds later. Running and out of breath, I finally topped the hill. Far down the slope, near a brushy creek draw, Shell sat with the big bird in her mouth. As I drew near she asked, "What ya running for? It was never in doubt."

And one of my favorite memories is of a day my dad and I hunted the tops of some big ridges in Giles County. A snowstorm hit us and by the time we finished up, it had left us with a bitter cold wind and three or four powdery inches on the ground. We didn't find a single grouse, but we ran into a guy taking photos of the scenery from the high cliffs—panoramic views of the snowy valleys below. He offered to take a picture of the three of us and mail it. You don't find many folks out in weather like that taking photographs who are not trustworthy, and he was no exception. Dad and I both have that picture in barn-board frames—the three of us eleven years younger and fitter with Shell, in her prime, trying to break free and keep hunting.

* * *

For the first time, I had to leave Shell behind last fall. It killed me to do so and I agonized over it for days. I was invited to go hunting in Nebraska with a friend. I hadn't been out West in eleven years and had two new dogs that needed a test. A trip like this one I knew would not be for the meek. I was looking at twenty-plus hours of pure road time one way and six or seven days of hunting non-stop from daylight till dark through heavy cover. I feared Shell would not have fared well. And I also concluded that bringing her along might somehow rob the younger dogs of the trip they deserved. Too much thought, all of it making me realize just how much we'd shared and how much of my own life had passed.

The young dogs and I had a great trip and added many new frames to my life movie, but I wish I had taken Shell. It was my fear that kept her home, not hers.

Above everything else, I remember driving home after long days of hunting, after friends had left, and we were just the two of us again. Shell always rode up front with me. I'd let her eat a can of dog food and give her a drink, and then she'd struggle into the seat next to me—beyond tired and finally accepting the day's end. We'd both settle in with a relaxed sigh that only the contentedly weary know. Many times we would have a two- or three-hour road trip ahead of us. My favorite time was this ride home, petting her head now and then, feeling at peace. No radio, no talking. Just the hum of the road and the engine, while listening to an old bird dog sleep and watching her dream. □

Marc Puckett is a small game biologist and also leads the quail program for the Department of Game and Inland Fisheries.

A Model of Wildlife

"Conservation means the wise use of the earth"

by King Montgomery

The North American Model of Wildlife Conservation is very different from any other method of resource management elsewhere in the world. The concept took root before the time of the American Civil War, grew to a more formal structure by the early 20th century, and has matured over the years—working remarkably well ever since. Not that the model is perfect; nothing conceived by humans ever is. It could stand some modest but important revision as we travel through the 21st century.

The foundation of the wildlife conservation model is the Public Trust Doctrine (PTD), which has its genesis in a U. S. Supreme Court ruling in 1842 and has been upheld over the generations by subsequent legal decisions. In short, the PTD provides the underpinnings for government at the federal and state levels to protect, conserve, allocate, and control wildlife for the benefit of the public. Thus, it attempts to define the limits for human impacts to and upon the removal of wildlife from the biota. The wise use of natural resources, including fish and other wildlife, remains its core value.

Therefore, unlike in other countries of the world, in North America no one person owns wildlife; rather, ownership resides with the entire citizenry. Wild animals are held by governments in trust for the benefit of present and future generations.



Eugene Hester

The Model

"The seven tenets of the North American Model of Wildlife Conservation have provided the foundation for the most successful wildlife management model in the world."

—Bob Duncan,
DGIF Executive Director

There are seven tenets of the model, sometimes referred to as the seven pillars and the seven sisters of wildlife conservation. Although the model mostly concerns wildlife, both hunted and non-hunted species, fish are an important part of the equation too. Hunters and anglers alike are charged with supporting and influencing the model's success to the benefit of the public at large.

❖ Wildlife is held in the public trust.

In much of Europe and elsewhere, wildlife belongs to landowners, to the wealthy, and to the privileged. At one time royalty and titled persons owned all wildlife, and anyone poaching animals was subject to strict punishment, including death. In Canada and the U.S., you and I "own" fish and wildlife.

❖ Elimination of markets for wildlife.

Commercial hunting for wild meat, hides, and other body parts is a thing of the past. Unfortunately, before this tenet took effect, the

Life Conservation

and its resources for the lasting good of men."

—Gifford Pinchot
(1865–1946)

American bison (buffalo) almost was extirpated by market hunters, and billions of passenger pigeons were hunted to extinction. Also in the early 20th century millions of shorebirds, including egrets and herons, perished to provide feathers for ladies' hats.

❖ Hunting and fishing laws are created through public process.

Federal, state, and provincial governments establish hunting and fishing seasons, set harvest limits, and define and levy penalties for violations. Everyone has an opportunity through elected officials, and through communication with authorities, such as during public and town hall meetings, to help shape laws and regulations as they apply to wildlife management and conservation.

❖ Wildlife can only be harvested for legitimate purposes.

The killing of wildlife for frivolous reasons is unacceptable. "Legitimate purposes" include killing for food, fur, self-defense, and in some cases for protection of property. Many states follow the "Code of the Sportsman" as promulgated by naturalist and conservationist George Bird Grinnell over a hundred years ago that hunters use without waste any game they kill.

*"Plans to protect air and water,
wilderness and wildlife are
in fact plans to protect man."*

—Stewart Udall

©Lynda Richardson



*"A thing is right when
it tends to preserve
the integrity, stability
and beauty of the
biotic community.
It is wrong when
it tends otherwise."*

—Aldo Leopold

❖ **Wildlife are an international resource.**

Animals don't know or care about borders or territorial waters. Canada and the U.S. work closely together to regulate and manage animals that cross borders by walking, flying, or swimming. One of the finest examples of this critical cooperation is the Migratory Bird Treaty of 1916, followed by a number of important treaties for everything from songbirds to waterfowl. Another is the Convention on International Trade in Endangered Species of Wild Fauna and Flora, in which 175 countries take part.

❖ **Wildlife policy is based on science.**

Policy should not be based on politics or raw emotion. In the early 1930s Aldo Leopold and other concerned conservationists saw that informed decision-making in fish and wildlife management is critical to

conservation. Unfortunately, all too often political appointees and others not trained in the sciences hold sway over the professionals in matters of conservation.

❖ **The democracy of hunting.**

European and other countries' practices allocate wildlife for hunting by land ownership, wealth, and other measures of privilege. In North America any citizen in good standing can participate in all facets of wildlife management, particularly as it pertains to hunting. Theodore Roosevelt, an avid hunter and a great conservationist, was an early proponent of the democracy of sport hunting. Since the inception of the North American model, hunters and anglers have borne the brunt of the responsibility of wildlife and fish management, including funding, to the benefit of the population at large.

The Conservation Model in the 21st Century

"Perhaps the greatest challenge to the wildlife conservation model and the continued success of our country's wildlife management programs is to establish sustained funding by broadening the support base. To be sure, the model has served us well; however, the need for a more comprehensive approach to conservation and the absolute need for sustainable funding for such an approach is at hand."

—Bob Duncan

Although the model is as valid today as ever, drastically changed circumstances argue for some reform in order to keep pace. Reforms are being promulgated by renowned professional wildlife managers, and adequate, sustained funding is at the top of everyone's list. Fortunately, in the Old Dominion a small portion of the state sales tax on hunting, wildlife



viewing, and fishing products goes to the DGIF to help supplement the fees and licenses paid by hunters, gun owners, trappers, and anglers; and we reap a benefit from the Pittman-Robertson Wildlife Restoration funds. But current funding is not adequate to keep up with the ever-changing times and evolving conservation challenges. New revenue sources need to be identified.

In The Wildlife Society's February 2010 issue of the *Journal of Wildlife Management*, in an article entitled "A Conservation Institution for the 21st Century: Implications for State Wildlife Agencies," renowned wildlife scientists Cynthia Jacobson, John Organ, Daniel Decker, Gordon Batcheller, and Len Carpenter offered four considerations for reform of the wildlife conservation "Institution" to "secure the relevance of the Institution into the future: broad-based funding, trustee-based governance, multidisciplinary science as the basis of recommendations from professional staff, and the involvement of diverse stakeholders and partners in the Institution."

That a broader-based money source to move state agencies into the new century is essential has been addressed somewhat above, and many options or combination of options exist to augment this all-important funding need. For example, if everyone pays for wildlife through a centralized taxing system, all citizens would have "a standing with respect to input about management of wildlife as a public resource."

The reform concerning trustee-based governance calls for a diminution or dissolution of political authority over fish and wildlife trustees, a move not likely to be at all popular with elected and appointed officials. Simply stated, politicians must recognize that the public trust in wildlife management and conservation needs to be apolitical. Jacobson and her co-authors argue the accomplishment "of such reform in governance likely can only be achieved

©King Montgomery



*"We do not
inherit the earth
from our
ancestors,
we borrow it
from
our children."*

—Native American
Proverb

through advocacy of a strong coalition of partners willing to speak with one voice and exert the requisite political pressure."

Science must, as is stated in the wildlife conservation model, prevail in managing wildlife resources. It seems a blinding glimpse of the obvious that decisions only should be made with the best available information on a given subject. In practice, however, narrow interpretation of limited information sometimes steers the effort in wrong directions. When opposing opinions in management matters occur, science must prevail.

The authors assert the "iron triangle relationship" between resource management agencies, traditional user groups such as hunters and trappers, and policymakers excludes others not in the group from the decision-making process vis-à-vis wildlife management and conservation. Thus, wildlife organizations, which do exemplary work under the wildlife conservation model, need to include input from "non-traditional partners" to accomplish their goals.

Conclusion

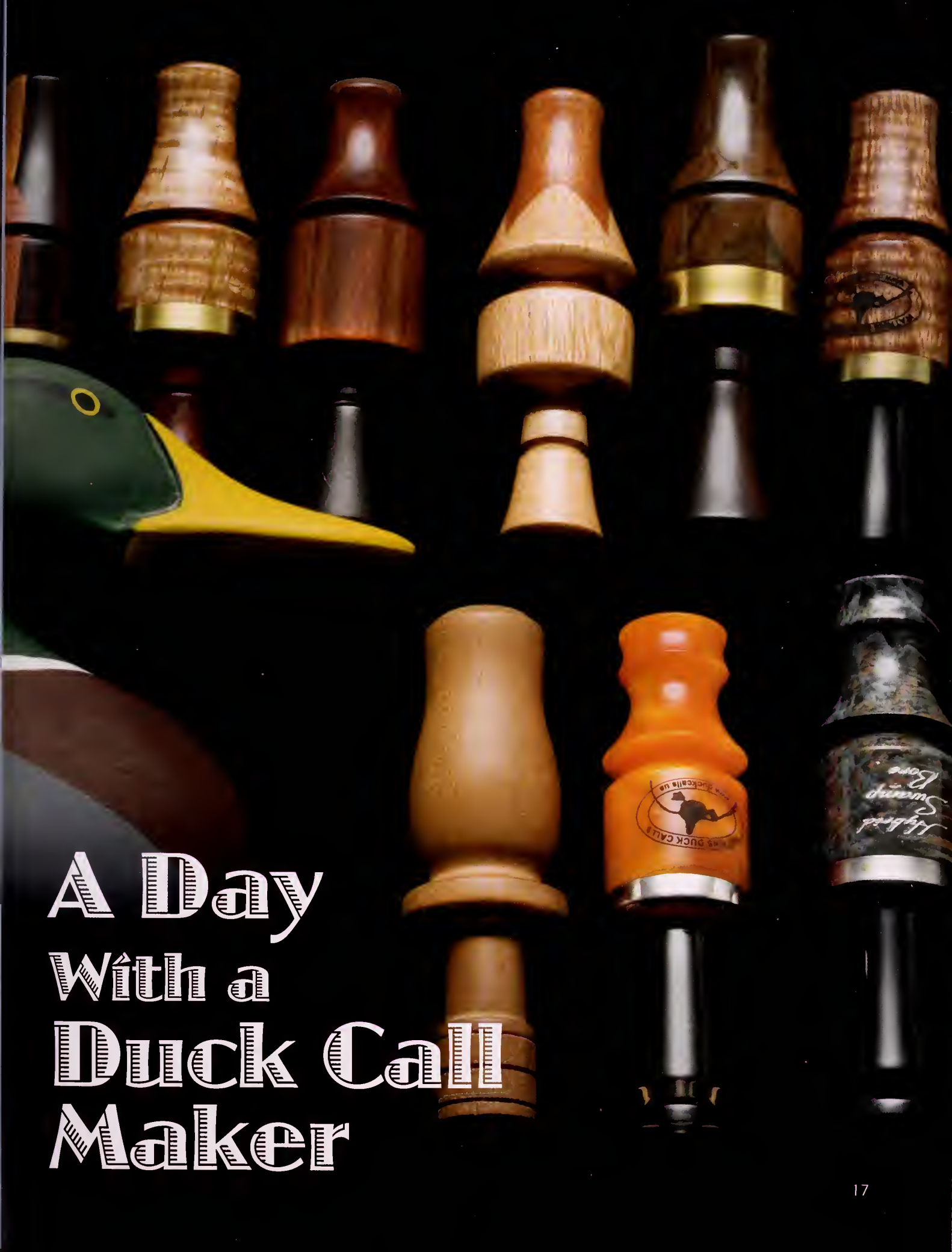
"...the nation behaves well if it treats the natural resources as assets which it must turn over to the next generation increased and not impaired in value..."

—Theodore Roosevelt, 1919

The North American Model of Wildlife Conservation is the world's most successful way to manage, regulate, and conserve animals that we hunt, watch, photograph, or just enjoy knowing are there. While other countries struggle to conserve what little they have remaining, we enjoy an abundance of many desirable species—deer, wild turkeys, ducks and geese, to name a few. Adherence to the seven tenets of the model, coupled with prudent modification based on societal changes, will ensure that we are able to do so in the future. □

King Montgomery, of Burke, is a frequent contributor to Virginia Wildlife and an ardent angler, outdoor writer, wildlife photographer, and occasional bird hunter.





A Day With a Duck Call Maker

story by Tee Clarkson
photos by Eric Rutherford

Virginia has as deep and rich a duck hunting tradition as anywhere in the United States. Brushing up against the Chesapeake Bay and the seemingly endless tributaries that feed it, the commonwealth boasts tremendous amounts of open water and marsh for resting and migrating fowl of all sorts. That's before even mentioning the Eastern Shore and its acres upon acres of marshes and agricultural fields flooded by ducks and geese each winter. Rivers like the Pamunkey, the Mattaponi, the Potomac, the Rappahannock, and the James have been gunned by Virginia hunters for as long as they have tossed out decoys and waited on ducks. Born of these traditions are many of today's hunters, those whose first guns came

from grandfathers, those who grew up on stories of the "old days" in duck blinds that have since become wooden stakes scattered here and there, barely visible above the high tide line.

Duck call maker and avid waterfowler Brian Watkins is one of those hunters. His father and grandfather grew up in Poquoson, hunting the Chesapeake Bay and surrounding marshes. By the time he was six, Brian was calling ducks in the creek behind his house. At ten he was competing in and winning junior calling competitions. Before long, Brian's father, a retired aerospace engineer, was teaching him how to turn wood, and Brian was cutting the reeds for his first duck calls from milk jugs.

Brian's grandfather was a waterman, so Brian spent plenty of time with him on the water growing up. One of his many jobs was bagging clams during the summer months



Brian makes his calls in the workshop behind s the evenings after the kids are in bed.



when he was out of school. By the time Brian was old enough to start hunting, his grandfather didn't go afield very much anymore. In fact, they hunted together just one time, but Brian still remembers fondly his grandfather on Thanksgiving and Christmas, when the family would gather for a meal, listening to the stories he told of his recent hunts with his father. Brian still lives in Poquoson, within a few miles' radius of most of his relatives, with his wife Kristin and his two boys, Troy and Cole. Troy is excited by the prospect of hunting with his father, although at age five it will be a few years



use. That's usually where you'll find him in

mallards a little closer to the blind. Not used to putting out such a big spread, I was amazed how quickly we were able to get it set—a testament to Brian's organization and attention to detail when it comes to waterfowling, the same skill set that makes his duck calls so effective.

With fifteen minutes left before shooting time, Brian, photographer and friend Eric Rutherford, and I stood in the blind drinking coffee and breathing in the anticipation that comes with the first hint of light. As shooting time arrived, we watched several knots of divers as they swept across the bay like a swarm of bees. They were not headed our direction, but it was nice to see there were some birds around. As is often the case when everyone is fixated on something in the distance, whether it is a boat or a turkey roosting in a pine, a single duck came gliding over the blind and surprised us all. Brian quickly hit a comeback call, and the duck banked into the wind. After one more pass and another comeback call, the hen mallard set her wings and pitched toward Eric's end of the spread. He knocked her down just at the edge of the decoys. We were off to a good start.

Brian made his first duck call when he was 12. "We didn't have the Internet back then of course," said Brian, now 34. "It was a self-taught discipline. I learned from trial and error. Back then I wasn't as concerned about how the calls sounded. It was just fun."

Before long Brian started winning competitions with his calls. He

gave a lot of the early calls away to local hunters and friends before ultimately starting to sell a few, as word got out. Now, he turns out anywhere from 350 to 500 calls a year from his work station in the shed behind his house. Still, Brian makes calls because he loves to do it. While it is a nice side business for him, he doesn't have any plans to quit his day job as a fisheries biologist with the Virginia Institute of Marine Science.

"I wouldn't want to have to sell the next call to feed my family, Brian admitted. "That takes on a whole new element."

While the hunt had gotten off to a fast start with a bird in hand after just a few minutes, the next several hours yielded nothing but a few sightings far in the distance.

"This article may end up being mostly about Jonah," Brian said, alluding to the biblical character swallowed by a whale, and now a name



Brian makes both single and double reed calls. If you want one custom tuned, stop by and he will be happy to tinker with it.

down the road. Already, he anxiously awaits hunting stories from Brian when he returns from the watery marshes of the Bay.

Last season, I was fortunate to have the opportunity to hunt with Brian a few days after Christmas. We met at the boat ramp an hour before dawn. The forecast was calling for cold temperatures and heavy winds; good conditions for waterfowling.

After a short run to his blind, we began setting decoys. We placed a couple dozen geese first and then set three or four dozen diver decoys in a hook. We finished with a group of





Brian's passion for duck hunting has never waned since he was a kid growing up on the Chesapeake Bay. If duck season is in, odds are Brian is in a blind or a boat somewhere searching for the next flock of birds.

associated with anyone believed to bring bad luck to those around them. I didn't know whether he was referring to me or Eric, but I was fairly confident it was Eric, as he had received most of the morning's ribbing for being a duck hunter from the mountains. The two have known each other long enough that they pass as many insults as compliments, a sure sign of a good friendship.

With the air free of birds for a while, they launched into stories from their days together at Virginia Tech. The best of which being one Brian told about a cookout he and some of his friends had in college. They were cooking oysters on the grill when several guys they had invited from near Abingdon, where Eric lives, showed up. "They took one look at those oysters on the grill," Brian started to chuckle, "and said what in the world are y'all doin' with them rocks?" I was still laughing when I heard the first honks from behind the blind.

They sounded close at first, but looking up we noticed the large group of roughly 70 geese were still very high, with seemingly no intention of coming down.

"Might as well try 'em," Brian said, grabbing the goose call on his lanyard. Remarkably, with some loud and convincing calling, he and Eric managed to split the birds into two groups, pulling one down closer and closer toward our spread. It seemed like it took them forever, but eventually they circled a last time and came right in. We stood and dropped five from the group of what had to be pushing 35 or 40 birds.

By now it was "blowin' a gale" as Brian put it, and he jumped in the boat and picked up the birds, a difficult task for one person with the winds gusting at 30 miles an hour. By the time he returned it was getting along toward that time in the morning when our odds of having any more shooting were growing increasingly slim. We gave it another 30

minutes and then started picking up the decoys.

I am of the school that adheres to the idea that success in any outdoor pursuit should never be measured in numbers; however, I could recognize that this day would feel far different without those geese in the bag. They had saved the Jonah, whether me or Eric, and provided Brian with a good story for Troy this particular night; a story, no doubt, that would stoke the fire that burns in the heart of a future waterfowler, one who perhaps will soon be calling ducks in the creeks near Poquoson with a handmade call of his own and little brother Cole tagging alongside him. □

Tee Clarkson is an English teacher at Deep Run High School in Henrico Co. and runs Virginia Fishing Adventures, a fishing camp for kids: tsclarkson@virginiafishingadventures.com.

For information on Brian's duck calls, visit www.duckcalls.us.



Lee Walker

Coursey Springs:

A State-of-the-Art Hatchery

by Beau Beasley

I am a full-time firefighter with two young children, so my time on the water is fairly limited. And yet I can't seem to help myself when I pass over a bridge or by a farm pond: I have to jump out and try to spot fish. I don't actually have time to try to catch them—but I like to see them, nonetheless. So when I heard that the Department had recently renovated a hatchery in beautiful Bath County, I needed little encouragement to check it out.

"They're hungry this morning," announced Eric Wooding as we made our way toward several round steel tanks, each about four feet high and 20 feet across—and each holding hundreds of various types of trout. The plastic bucket he was carrying made a ticking sound as it brushed the side of his leg; the contact also caused the feed to shift in the bucket. The fish must have either heard the feed shifting or felt the vibration of our approaching footsteps because, by the time we reached the side of the tank, I could see what anglers describe as "nervous water" as the fish jockeyed for position. Wooding dug a red plastic scoop into the bucket and threw some feed into the tank, which exploded with countless hungry trout. I was clearly enjoying myself, so Wooding humored me and threw in another scoop of feed. The water exploded again, and this time the splashing doused us both.



© Beau Beasley

The Coursey Springs hatchery will raise nearly 700,000 trout for anglers across Virginia.



©Beau Beasley

Feeding time at the hatchery is cause for great excitement among the trout.

Coursey Springs By the Numbers

The Coursey Springs Fish Cultural Station raises approximately 700,000 rainbow, brown, and brook trout a year. The fish arrive as young fry from other state hatcheries and are ready to be released when they are 10–12 inches long. It can take up to a year for a trout to grow large enough to be stocked. The fish are fed 3 to 5 times a day, depending on their age and other biological needs. The fish are raised in tanks that are between 20 and 40 feet wide and that hold as many as 28,000 gallons of water each. The facility cost \$13 million to build and was constructed in only 18 months. The Coursey Springs hatchery stocks trout in ten surrounding counties and is open seven days a week to the general public. Please call ahead (540-925-2343) so that staff members can arrange for someone to meet you when you visit.

Wooding supervises operations at the Coursey Springs Fish Cultural Station. He and his assistant, Bryan Decker, were preparing to feed their finned charges when I arrived. The feed bags, which the two men load into the hatchery pickup truck themselves, easily weigh one hundred pounds apiece. Hundreds of bags of feed are stacked in the small warehouse onsite, and Wooding and Decker both check carefully to ensure that the fish in each tank get the proper mix of feed according to their age and condition. Each bag is coded and tagged before it leaves the warehouse. In a typical month, Wooding and Decker may go through 30,000 pounds of fish food.

Wooding and Decker sort the feed for each type of fish according to size and biological needs: “We don’t

just throw any old feed pellets to our fish; we’re very precise in controlling their diets to keep them healthy and to help them reach maturity as soon as possible.”

Each year thousands of anglers access public waters in Virginia in hopes of wiling away a few quiet hours, enjoying the solitude of the outdoors—and perhaps even bring home a trout or two for dinner. Hatcheries like Coursey Springs stock public waters precisely so that anglers have the opportunity to go home with their catch, but they also buttress a stream’s population when it gets too low. It’s a common misconception that the commonwealth “just dumps” fish into any coldwater stream that might support trout. This is simply not the case: Officials stock throughout the year and time the stockings to ensure that fish have the best chance of survival. The fish might live for many years, so choosing the right stream or river is important.

Hatchery staff and state biologists work together to ensure that streams that support native fish like brook trout aren’t stocked with brown trout. Different trout have different needs and tolerance levels, and stockings allow for changes in a river over time. If, for example, a stream warms because of heavy development in its watershed or some unusual natural event, biologists may determine that although the stream can no longer support rainbows the elevated temperature would not adversely affect brown trout.

Coursey Springs even raises sterile fish for stock that they can use as a control group to test the health of a stream. If it’s determined that the sterile fish are not a good fit, they eventually die off. And as it’s impossible for them to reproduce, there is no threat of mating occurring between hatchery and wild populations.

In spite of its clearcut mission, the hatchery’s remote location presented a challenge for renovation work. “We’re not near the interstate,” Wooding pointed out, “and as a result, by the time any concrete arrived

it would have been in the trucks too long to use.” To overcome this obstacle, the general contractor on the project, Lantz Construction from the town of Broadway, created its own miniature onsite concrete plant and poured nearly 2,800 yards of concrete. “Lantz Construction was great about checking ahead to see if a problem loomed on the horizon and worked with us to make changes accordingly.” This coordinated effort between all parties kept the job on time and, surprisingly, on budget.

In general, all hatcheries suffer the loss of fish from predation or from disease, or both, and all hatcheries have to handle waste appropriately. Coursey Springs addresses both problems. A roof covers the facility, which prevents predation from above (by birds, most obviously). Fencing surrounds the hatchery, preventing minks, possums, and even bears from helping themselves to a taxpayer-financed meal. The result of these upgrades is that Coursey Springs loses only about 2 percent of its fish to disease or predation.

A 40-micron filter serves to remove any waste from the water. Anything larger than 40 microns is sent to an onsite settling tank. Large particles are pumped out to trucks and used as fertilizer on nearby farms. The system is so efficient that the hatchery can recycle as many as 3,500 gallons of water a minute.

Fishing at the hatchery?

Running alongside Coursey Springs is beautiful Spring Run, which receives the clean effluent from the hatchery. Spring Run itself recently received a facelift when the Department placed downed trees in and along the banks to hold them in place. The trees, inserted “head first” with their roots exposed and hanging into the water, also serve as spectacular shelter for the stocked trout.

Anglers can fish Spring Run, which sits just below the hatchery, starting in January and can access it easily from Indian Draft Road. The stream will be a catch-and-release-

only location where anglers may use only single-hook artificial lures. I plan to fish Spring Run myself just as soon as I can. Even if I come up empty-handed, I can tour the hatchery and get my fill of fish. □

Beau Beasley is the director of the Virginia Fly Fishing Festival, www.vaflyfishingfestival.org. His new book, Fly Fishing the Mid-Atlantic, is available at www.beaubeasley.com.



Top, Spring Run is a new catch-and-release fishery just south of Coursey Springs. Above, hatchery staff and CWF volunteers prepare to stock the South River at Grottoes.



Estuaries to

story and photos by Gail Brown

**Awakening
young
minds
with
the gift
of nature.**

Here come the holidays! And not surprisingly, good citizens from Bristol to Hampton—punctual in most matters—will find themselves caught between the eggnog and the pecan pie with no gift in hand.

Except for the teacher's gift; everyone's ready with that one. And none more so than volunteers Jody Turner, Barbara Dunbar, and Teresa Bennett, creators of *Estuaries to Oceans*, a science field trip experience given each year by these moms to fifth grade students and teachers of York County. While Turner, Dunbar, and Bennett have volunteered for years leading after-school science clubs and establishing outdoor classrooms, they had never before attempted anything of this magnitude.

Yet, like a Christmas cactus suddenly in bloom, *Estuaries to Oceans* seemed to appear without effort. That, of course, is not how it happened at all.

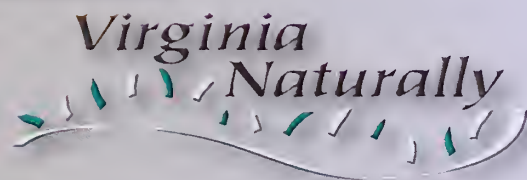
In 2009, giving themselves only 75 days to get it all in place, Turner, Dunbar, and Bennett wrote and received a grant from the Virginia Department of Environmental Quality (DEQ)/Virginia Naturally Partnership grant program. Using grant funds carefully, they purchased materials that could be reused and begged and borrowed the rest. (Children's rooms were looted; husbands' golf equipment and tackle boxes were all fair game.) If their time was short, their focus was clear: All fifth grade students and teachers at Seaford Elementary School would be given a science field trip designed to awaken their curiosity about nature and reconnect them with the natural world. The first field trip, planned for



Far left, York County Master Gardener Patsy Wells helps students measure and compare water quality indicators such as pH and dissolved oxygen. Handheld electronic field equipment and water testing kits are used by the students.

Left, while PVC pipe, frisbees, velcro strips, and connectors are provided, each participant must supply the creativity needed to solve the problem at hand. The challenge: build a buoy that can float and support a cargo of golf balls.

Oceans

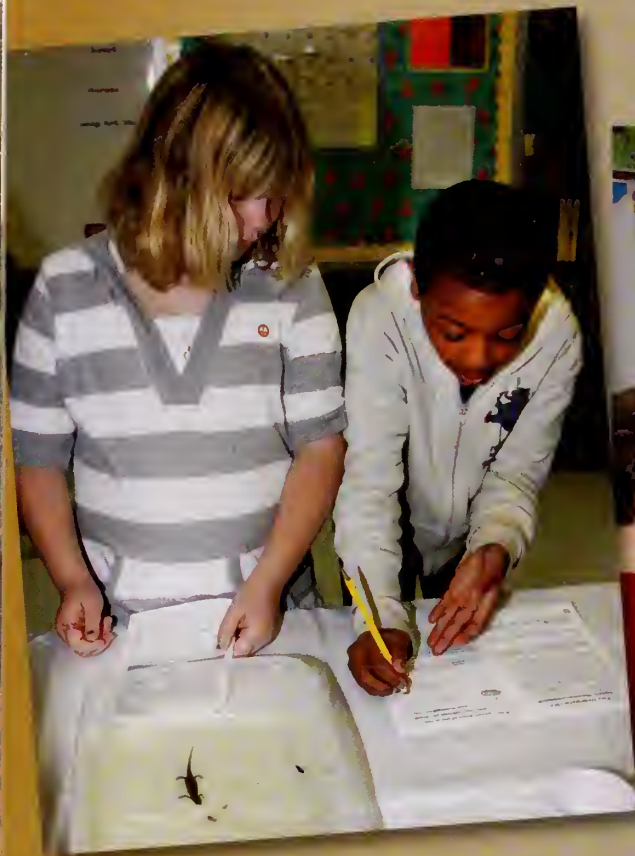


Retired William and Mary Geology Professor Dr. Jerre Johnson makes learning fun by asking challenging questions and sharing stories about the geology and history of Virginia. Each child received a Jefferson scallop, the official state fossil.

April, would serve as a template for future programs.

Seaford Elementary, a first-year Virginia Naturally School, is located adjacent to 600 acres of forested wetlands owned by The Nature Conservancy. The conservancy joined the many other organizations committed to helping *Estuaries to Oceans* by granting permission to use the wetlands for extended nature walks. Seaford students recycle, maintain several gardens that are wildlife habitats, and participate in PTA-sponsored Earth Day activities. As part of the team, Seaford would welcome other county schools to their campus to participate in future *Estuaries to Oceans* programs. Last year Mount Vernon Elementary was the first to do so.

To date, almost 300 students have participated in *Estuaries to*



Freshwater macroinvertebrates are borrowed and returned (with a DGIF permit) from a nearby waterway. Students use a variety of methods to identify the animals and then share their findings with the group.



John Lewis from the Jamestown 4-H Center helps students learn about native animals they might see in a forested wetland.

Oceans field trips. All field trips follow the same format: Students rotate through six to seven different activity stations which are led by community volunteers with backgrounds in science and by representatives from local and state agencies. While access to the wetland offers unbelievable opportunities to discover nature's secrets, "No matter where you are, at school or in your own backyard, there is so much to see and learn from nature," states Turner.

Assistant Principal Christina Head has first-hand experience with the program both as an administrator and as a parent. Her daughter participated in the program last year and her son is looking forward to his turn. "My child and others were given an opportunity to see and understand things in nature they normally wouldn't have noticed. My family



was given an opportunity to have a rich conversation about environmental issues at the dinner table. It was like we all received a special gift."

And those three moms who brought the gift to school? They're pretty special, too. □

Gail Brown is a retired teacher and school administrator.

With guidance from Lisa Deaton, Virginia Department of Forestry, students identify area trees. Each child received a tree identification guide to continue their research at home.



Journal

2010-2011 Outdoor Calendar of Events

Unless otherwise noted, for current information and registration on workshops go to the "Upcoming Events" page on our website at www.HuntFishVA.com or call 804-367-7800.

December 10-11: Youth Deer Hunting Workshop, Claytor Lake State Park. For youth 12-17 who have never harvested a deer with a muzzleloader.

December 11: Novice Youth Deer Hunt and Workshop, Occoquan Bay National Wildlife Refuge. For youth 12-18 with less than 3 years hunting experience.

December 14-January 5: Audubon Christmas Bird Count. For more information: <http://birds.audubon.org/christmas-bird-count>.

You Can Make a Difference



HUNTERS FOR THE HUNGRY

Hunters for the Hungry receives donated deer from successful hunters and funds to cover the costs of processing, so that venison may be distributed to those in need across the state. Each \$40 contribution allows another deer to be accepted. Hunters donating an entire deer are not required to pay any part of the processing fee.

The David Horne Hunger Relief Bill gives hunters the opportunity to donate \$2 or more to the program when purchasing a hunting license. One hundred percent of each donation goes to providing venison to the hungry. For additional information or to make a donation, visit www.h4hungry.org or call 1-800-352-HUNT (4868). Each of us can make a difference.



by Beth Hester

In That Sweet Country: Uncollected Writings of Harry Middleton

Selected by Ron Ellis
2010 Skyhorse Publishing
www.skyhorsepublishing.com
Hardcover \$29.95

"After twilight, we gather up our gear, walk back down the logging road toward the truck, thinking of the evening, the swirling pool, the gorgeous trout, the light glistening off the pool before dusk like starlight. Beside us, as we reach the truck, the river runs on, a low, roaring sound in the darkness."

—Harry Middleton

Readers of such publications as *The New York Times*, *Sports Illustrated*, *Southern Living*, *Gray's Sporting Journal*, and *Field & Stream* will recognize the name Harry Middleton. Though he died prematurely of a massive heart attack in 1993, Middleton was a sportsman and distinguished writer who left behind hundreds of richly-detailed personal essays, stories, and reviews. Especially beloved are his carefully crafted portraits of favorite sporting landscapes and the rich, quirky characters who inhabit them.

His interests were ecumenical in flavor and his subject matter, wide-ranging: fly-fishing the mountain streams of southern Appalachia, autumn gobblers and wing bone calls, the relative merits of graphite and bamboo rods, eccentric crow behavior, an angler's daydreams, sudden

storms. Though highly individualistic, Middleton's work is in the best tradition of writers such as Taylor, Buckingham, McGuane, and Gierach.

Now, thanks to the efforts of Ron Ellis and Middleton's widow, Marcy, *In That Sweet Country* is a publishing achievement, a compilation of previously uncollected fishing and hunting tales, nature profiles, and personal recollections. It's a real treat for Middleton fans who were left wanting more.

Since the month of December ushers in the winter holidays—a time for friends, family, and inner reflection—this inspiring volume is appropriate seasonal reading and makes a perfect gift for the thoughtful sportsperson in your life.

To close out 2010, I present you with Middleton's lovely meditation on trout fishing:

"Among fish, trout are a luxury, beautiful prima donnas worth every trick, bit of tomfoolery, gadget, and deceit it might take to hook one. It's exciting to feel its power and grace, however briefly, before removing the hook, gently nudging its iridescent flanks, watching it return to the deep pool, or fast water of a mountain stream, the world where it inexorably belongs. And as for me, perhaps next season, I will slip off the waders, slip on my shorts and tennis shoes, and tie on a No. 14 Adams. I will settle back, and take whatever splendor and trout the days might bring."

Happy Holidays! □



To learn more about Find Game, visit www.HuntFishVA.com/hunting/findgame

ATTENTION YOUNG WRITERS

Wondering what to do over the holidays?

The Virginia Outdoor Writers Association annually sponsors two writing competitions for Virginia high school students (grades 9-12) and undergraduate students attending a Virginia college or university. Awards of gift certificates, outdoors gear, and cash are offered for winning entries.

Go to www.vowa.org for contest guidelines, the submission deadline, and other details. Then grab some paper or a laptop and get to work!

THE EDITOR

Wishes to thank everyone on staff who helped to make the 2010 magazine series a success! To those of you who reviewed content for accuracy, or caught typos, or perfected captions, or simply provided valuable feedback (you know who you are), please accept my deep appreciation for your assistance.



Virginia Wildlife
Calendar 2011

It's once again time to purchase a **Virginia Wildlife calendar** a thoughtful gift that's still a bargain at **\$10 each.**

Quantities Are Limited, So Order Yours Today

As always, the calendar features spectacular photography and useful information to the outdoors enthusiast, including hunting seasons, favorable hunting and fishing times, wildlife behavior, state fish records, and more!

Make your check payable to "Treasurer of Virginia" and send to:
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Sally Mills

2010 Limited Edition Virginia Wildlife Collector's Knife

Our 2010 Collector's Knife has been customized by Buck Knives and features a bobwhite quail in flight. The elegant, solid cherry box features a field scene. Knives and boxes, made in USA.

Item # VW-410

\$90.00 (plus \$7.25 S&H)

To Order visit the Department's website at: www.HuntFishVA.com or call (804) 367-2569. Please allow 3 to 4 weeks for delivery.

VIRGINIA WILDLIFE OUTDOOR CATALOG



2009 Limited Edition Virginia Wildlife Collector's Knife

Our 2009 Collector's Knife (customized by Buck Knives) features a wild turkey in full strut. The elegant, solid cherry box features a forest scene. Knives and boxes, made in USA.

Item # VW-409

\$85.00 (plus \$7.25 S&H)

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Contact Person: Sally Mills, Editor, Telephone 804-367-0486

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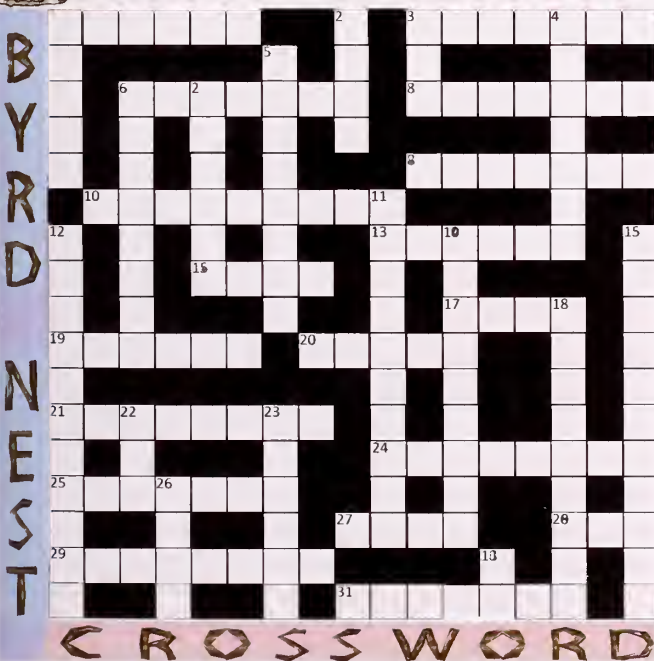


"Looks like I missed three calls of the wild."

Christmas BIRD COUNT

December 14–January 5
Get Involved!

www.audubon.org/bird/cbc/



ACROSS

- Holiday fir tree
- Tall medieval bow
- Tawny brown heron
- Breakwater, defense, earthwork
- State fish (nickname)
- Puffball tuft, weed
- Bullet force exerted on target
- Smallest animal in herd
- Tropical wading bird with curved bill
- Caldron, boiler for outdoor cooking
- Water lily
- Young bird, fledgling
- Crest of breaking wave over water
- Seek game with arrows
- Catch sight of, glimpse (old English)
- Art or practice of employing something
- Retrieval, reclaiming boat
- Let go of arrow of bow

DOWN

- Hardwood with gray bark; small edible nuts
- Animals identification ring
- Type of retriever, abbr.
- Mushroom shelf on trunk
- Animal under age two
- Scientist working w/plant life
- Boat easily tipped; associated with a yacht
- Related to Whip-poor-will (pl.)
- Exact imitator of other avian trilling
- 3-leaf plant causing itchy skin rash (2 words)
- Swamp tree with knees
- Aggregated elements of a building
- Female bear
- Natural scenery
- Deer foot
- Code on firearm

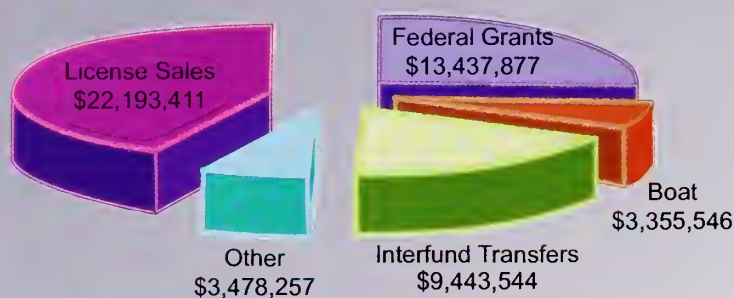
FINANCIAL

Fiscal Year 2010

(July 1, 2009 – June 30, 2010)

INCOME FROM OPERATIONS

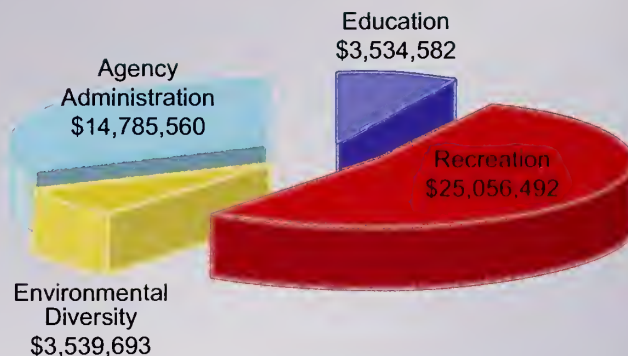
\$51,908,635



The Department of Game and Inland Fisheries is primarily funded through dedicated, special revenues. Some operating revenue comes to the Department through nongame contributions and other miscellaneous sources. About 43% of our operational revenue comes from the sale of hunting and fishing licenses; approximately 18% comes from transfers via the watercraft sales and use tax and House Bill 38; nearly 26% comes from federal grants; about 6% from boat registration and titling; and close to 7% from other sources.

OPERATIONAL EXPENDITURES

\$46,916,327



The Department uses a mission-focused budget divided into four functional areas: **recreation** (providing opportunities to enjoy wildlife and inland fish, including hunting and harvesting game, fishing, boating, and wildlife watching); **education** (promoting safety afield and appreciation for fish and wildlife resources); **environmental diversity** (managing habitat and populations of game and nongame species); and **administration** (improving agency funding and managing operations).

CAPITAL PROGRAMS

CAPITAL REVENUES

\$2,709,712



Capital Program Revenues are federal grants and Commonwealth of Virginia Revenue Bonds that are directly related to a capital project. The balance of the Department's capital expenditures is funded using revenue from operations or the Department's cash balance.

CAPITAL EXPENDITURES

\$8,552,873



Capital Program Expenditures are long-term construction projects, infrastructure improvements, and land purchases. The Department classifies these expenditures into three categories: acquisitions, dam safety, and stewardship (maintenance).

SUMMARY

Looking Ahead

The Department's financial sustainability is a topic agency leaders have discussed with key audiences, namely a 36-member Agency Advisory Group (which represents 300,000 anglers, boaters, conservationists, hunters, and wildlife watchers) and the Virginia Legislative Sportsmen's Caucus. For those who have not participated in these conversations, the following information will help demonstrate the agency's strong stewardship of the sportsmen's dollar.

Current Finances are Sound

The Board of Game and Inland Fisheries voted in June to approve a balanced FY2011 (fiscal year July 1, 2010–June 30, 2011) budget that would allow the Department (DGIF) to deliver services, invest in infrastructure, and maintain cash balances. The agency is proud to have accomplished a great deal by:

- ◆ Increasing outdoor opportunities;
- ◆ Improving customer service;
- ◆ Saving money; and
- ◆ Garnering additional revenue from non-sportsmen sources.

Since approval of the current budget, additional costs have been identified. The mandated 3% bonus for all state employees and VITA rate increases will require DGIF to use roughly \$1.5 million cash.

Future Funding Lacking

While current finances are sound, the future is less certain. Forecasts show increasing costs and decreasing revenues. DGIF will need to use additional cash balances to pay for operations. As a result, three years from now the agency will have insufficient revenue and cash to continue current levels of service.

Under consideration are actions to secure financial sustainability. The Board has complete accountability for our financial health, but limited authority. Using the few tools available, the Board agreed with staff's recommendations to propose the following regulations during their October meeting:

- ◆ Create a fee to use Department-owned public fishing lakes and wildlife management areas. A user with a valid hunting, fishing, or trapping license, or boat registration, or under 16 years of age will be exempt.
- ◆ Raise license fees any amount up to and including the statutory limit of \$5 each for resident licenses and \$50 each for non-resident licenses.

The Department is seeking public input on these proposals. An extended 120-day public comment period begins on December 16, 2010 and runs through April 14, 2011. That affords citizens an opportunity to share ideas and better inform Board decisions. There will be a Board meeting during that timeframe, scheduled for March 1, 2011, so that the public can speak before Board members. Final action on these proposals may occur in May 2011 with a potential effective date of July 1, 2011.

These proposals were not made lightly. DGIF leaders understand that some current customers may pay more in the future and some people enjoying agency services at no cost today may begin paying for them. The Department is committed to continually improving the public's experiences in the outdoors and is seeking creative measures to secure our growth and well-being.

— Matt Koch, Chief Operating Officer

Mission Statement

To manage Virginia's wildlife and inland fish to maintain optimum populations of all species to serve the needs of the Commonwealth; To provide opportunity for all to enjoy wildlife, inland fish, boating and related outdoor recreation and to work diligently to safeguard the rights of the people to hunt, fish and harvest game as provided for in the Constitution of Virginia; To promote safety for persons and property in connection with boating, hunting and fishing; To provide educational outreach programs and materials that foster an awareness of and appreciation for Virginia's fish and wildlife resources, their habitats, and hunting, fishing, and boating opportunities.

Department Goals

- Provide for optimum populations and diversity of wildlife species and their habitats
- Enhance opportunities for the enjoyment of wildlife, inland fish, boating, and related outdoor recreation
- Improve the understanding and appreciation of the importance of wildlife, inland fish, and their habitats
- Promote safe and ethical conduct in the enjoyment of boating, hunting, fishing, wildlife viewing, and related outdoor recreation
- Improve agency funding and other resources and effectively manage all resources and operations

For more information:
www.dgif.virginia.gov/finances/sources



It is a hard sleet that slaps against the window on a stormy December evening. The wind shuffles the roof shingles like a sticky deck of playing cards. My roommate, aka hunting partner, has a nice fire going in the fireplace and I have parked my stern as close to it as I can. But it's hard to enjoy the sleepy, hickory smoke aroma while the man of the house is frantically scampering about trying to get things in order for a duck hunt in the morning. I say morning, but if you have ever been duck or goose hunting, you know you are in the blind or standing knee-deep in a beaver pond long before any man or beast would call it morning. In fact, there are times when I have gone into a swamp so early I have met coonhounds coming out. But I am getting ahead of myself.

The reason there is so much confusion tonight is that the man I duck hunt with has again procrastinated and failed to keep any of the promises he made to himself at the end of last season. He *was going to* clean his gun and make sure any gunk from last year's hunts would not cause his gun to jam, like the time when 17 mallards came into his decoys and nearly landed on his hat. He *was going to* make sure that he took the 20-gauge birdshot out of his hunting coat and replace it with the 12-gauge steel shot. He *was going to* put new batteries in his flashlight. He *was going to* replace the thermos top he dropped into the brink while trying to pour coffee and hold a shotgun at the same time. He *was going to* fill the car up with gas so he wouldn't be looking for an open service station at

3 in the morning. He *was going to* untangle all the decoy lines so that he wouldn't be doing that in the dark at 5. He *was going to* get his HIP number to put on his hunting license—which is required to hunt migratory waterfowl. He *was going to* patch the hole just below his hip pocket in his waders so they would not fill up with ice cold water as he stood shaking like a martini mixer during the hunt.

Patching that hole also would prevent repeating last year's most embarrassing moment. Because he didn't want to drive home sitting in wet clothes, he removed his pants, put them in the trunk of his car, and drove home in his boxers. This was an admirable and logical idea, except for the fact he did not plan on a state police license check about a mile from his house. It appears that certain uniformed humans frown on other humans when a *certain* amount of fabric is not covering a *certain* amount of the epidermis of the other. Of course he had to present his driver's license, but his license was in his wallet, which was in his pants, which were in the trunk of the car.

It is simply amazing the number of people who knew him—who just happened to drive by—as he stood in his skivvies talking to that state trooper! And it is doubly amazing that his own wife didn't seem to recognize him as she slowly passed his car on the way to work.

Keep a leg up,
Luke

Luke is a black Labrador retriever who spends his spare time hunting up good stories with his best friend, Clarke C. Jones. You can contact Luke and Clarke at www.clarkecjones.com.



River Day

Sixth graders from King William spent a day at Sandy Point State Forest on the Mattaponi River in October, getting to know the watershed through meaningful, hands-on activities. Students rotated among teaching stations to learn about wetlands soils, fish seining, water quality monitoring, tree identification, river history, wildlife, and more. "River Day" was made possible through a partnership between the Mattaponi & Pamunkey Rivers Association and the King William Middle School. Successful outreach to some 180 students is due to the dedication of teachers, volunteers, staff of the state's natural resource agencies, and the National Park Service. Employees of the Department's King & Queen Fish Cultural Station were on hand to instruct some very excited up-and-coming anglers. □

—SHM



Photo Tips

by Lynda Richardson

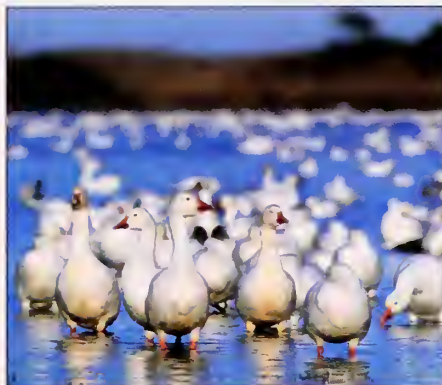
Another Season of Holiday Wishes!

I cannot believe December is here already! Wow. I'd better check my gift list and make sure that everyone is covered. To assist you with your holiday list, I've come up with some suggestions that will, hopefully, help you find the perfect gift for that photographer in your life.

Everyone who uses a digital camera needs extra batteries; particularly for their hot-shoe-mounted flashes. I recommend rechargeable batteries. Not only do they perform better and longer, they are more gentle on the environment since you are re-using them, as opposed to tossing them out after drained of power. I use the Powerex 2700 AA rechargeable batteries. They can be purchased locally through Batteries Plus or online at Thomas Distributing Battery Supply and Electronics. I bought mine online from Thomas (item number K-C204F-27-T) and the package included four Maha Powerex 2700 AA NiMH batteries, a AA-AAA Smart Battery Charger, a battery tester, a 12V DC cord, and a black storage bag—all for \$29.97 plus shipping. A bargain in my book! Check it out at: www.thomasdistributing.com.

Another great gift idea is the Hoodman HoodLoupe Professional 3" LCD Screen Loupe, as described in the October 2010 *Photo Tips* column. When shooting in bright light, this device surrounds the LCD screen, making it easier to review photographs. This loupe works most efficiently with the 3" LCD screen cameras. You can purchase the Hoodloupe through various camera shops, including B & H Camera & Video and Hunt's Photo, for \$79 plus shipping. Go to: www.bhphotovideo.com or www.huntsphotoandvideo.com.

How about giving the gift of a photography workshop! Many local camera shops including Richmond Camera offer a variety of classes on topics such as using your on-camera flash, studio portrait lighting, and basic composition. Check out local camera clubs, art museums, galleries, nature centers, zoos, and botanical gardens to see if these organizations offer classes as well. I teach



Looks like these migrating snow geese got stuck waiting in line while shopping for the holidays. Avoid the rush and get your gifts today! © Lynda Richardson

workshops in Richmond through Lewis Ginter Botanical Garden and the University of Richmond's School of Continuing Studies. In 2011, I will be expanding my workshops across the state. Prices can range from \$50 to \$300 depending on what you sign up for, but

I'm confident the photographer on your list would enjoy a class, whatever it is! To find out more, go to www.lyndarichardsonphotography.com. And check this column for listings of other workshops throughout the year.

I hope these suggestions will help you find a special gift for the photographer in your life. Happy Holidays and Happy Shooting! □

You are invited to submit one to five of your best photographs to "Image of the Month," Virginia Wildlife Magazine, P.O. Box 11104, 4010 West Broad Street, Richmond, VA 23230-1104. Send original slides, super high-quality prints, or high-res jpeg, tiff, or raw files on a disk and include a self-addressed, stamped envelope or other shipping method for return. Also, please include any pertinent information regarding how and where you captured the image and what camera and settings you used, along with your phone number. We look forward to seeing and sharing your work with our readers.

Image of the Month



Congratulations go to Juanita K. Csontos of Alexandria for her wonderful photograph of a fluffy red fox sitting in her backyard along Little Hunting Creek. Taken last December, Juanita used a Canon G10 digital camera, ISO 200, 1/160th, f/4.4. Great spotting Juanita!



by Ken and Maria Perrotte

Dining In

Your Goose is Cooked

The holidays are here with all the glad tidings, good cheer, and great food this season brings. One of the traditional main courses of many Euro-centric tables is roast goose.

There are many ways to clean and prepare a wild goose. Many avid goose hunters choose to breast out their bounty. Simply put, that wastes considerable meat. You can easily carve the breast meat from a Canada goose and, with just a few more artful slices and twists, remove the thighs and drumsticks as well. Slow cook these pieces in a crockpot and the boned meat is superb for soups and stews.

As with any game animal, the youngest legal animal will usually make the finest table fare. So it goes with geese. When you're sorting through the day's bag of honkers, look for the smaller birds that might represent the young of the year. The meat on these young geese is mild and tender and roasts superbly.

Plucking is more work, but the smiles and nods of approval you'll get when that roasted bird is carved and placed on the table will justify it.

Holiday Roast Goose With Gravy

- 1 Plucked (skin on) young wild goose (3-6 pounds dressed weight)
- Several leaves of fresh rosemary
- 1 large carrot, sliced into large chunks
- Several leaves of fresh sage
- ½ clove garlic
- 1 large, thick slice of onion
- 5 large mushrooms cut into large slices
- Salt
- Pepper
- ¼ cup chicken stock (or ⅓ cup for a larger goose)

Place rosemary, carrots, garlic, onion, and sage inside the goose cavity and on bottom of a roasting pan. Lightly season the whole goose with salt and pepper. Add chicken stock, cover or generously tent with aluminum foil, and bake at 350° for about 40 minutes or until a meat thermometer registers 160°. Remove cover and raise temperature to 400° for about 10 minutes, or until skin is nicely browned and internal temperature reaches at least 165°. A broiler that will accommodate something the height of a goose can also help brown and crisp the skin. Let goose rest while you make the gravy.

Gravy

- Drippings from roasting pan
- 2 or 3 tablespoons flour, divided
- 2 cups chicken (or goose) stock
- ¼ cup dry red wine
- ½ bay leaf
- Salt and pepper

Pour off all drippings, including vegetables, scraping up browned bits from pan. Skim off most of the fat. Add a tablespoon of goose fat and an equal amount of flour to a saucepan. Cook over medium-low heat, stirring constantly for about 10 minutes until mixture turns medium brown, essentially making a roux. Add wine, chicken stock, pan drippings, and bay leaf. Raise heat and bring to a boil. Reduce heat and simmer for about 10 minutes, stirring often. Strain through sieve to remove solids. Whisk together about a tablespoon of flour and one or two tablespoons of the gravy from the saucepan. Gradually whisk the mixture into the gravy to thicken. Salt and pepper to taste.

McKayla's Scalloped Potatoes

- 4 cups thinly sliced raw potatoes
- 1 ½ tablespoons of minced onion
- 4 tablespoons of butter, cut into small pieces
- ½ teaspoon salt
- ½ teaspoon black pepper
- 1 ⅓ cups of warm whole milk

In a shallow baking dish, layer half of the sliced potatoes. It's okay if slices overlap slightly. Top with half the onions, salt, and pepper. Dot with half of the butter. Repeat with another layer of ingredients. Pour the warm milk over the potatoes and bake uncovered at 350° for 1 ¼ hours.

Steamed baby carrots and baby Brussels sprouts make good vegetable pairings.

After every last morsel has seemingly been separated from the goose carcass, don't throw that bird away yet. Instead, boil it for about 30-40 minutes to create a flavorful stock that can be frozen for use in later dishes.

Serve with a merlot or other medium-body dry red wine. □

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